

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and/or removal of modular buildings and removal of decks, platforms, service backboards, etc. It is the contractor's option to salvage modular buildings.
2. Removing below-grade construction.
3. Disconnecting, capping, or sealing, and abandoning in-place site utilities.

1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, similar objects, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. If discovered, carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit a report, describing the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers. The site is on a school campus. Describe how the site will be secured from students and school personnel.

1. Adjacent Infrastructure: Detail special measures proposed to protect adjacent infrastructure to remain.

B. Schedule of building demolition activities with starting and ending dates for each activity.

C. Predemolition photographs or video.

D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician.

1.5 CLOSEOUT SUBMITTALS

- A. Inventory of items that have been removed and salvaged.

1.6 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

1.7 FIELD CONDITIONS

- A. Buildings to be demolished and/or removed will be vacated and their use discontinued before start of the Work.
- B. Buildings in the vicinity of the demolition area will be occupied. Conduct building demolition so operations of occupied buildings will not be disrupted.
 - 1. Provide not less than 72 hours' notice of activities that will affect operations of adjacent occupied buildings.
 - 2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings.
 - a. Do not close or obstruct walkways, exits, or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 1. Before building demolition, Owner will remove the following items:
 - a. Furnishings and stored materials.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. On-site storage or sale of removed items or materials is not permitted.
- F. Arrange demolition schedule so as not to interfere with Owner's on-site operations or operations of adjacent occupied buildings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

2.2 SOIL MATERIALS

- A. Satisfactory Soils: Backfill voids resulting from demolition operations with clean sand or topsoil.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Record the condition of items to be removed and salvaged.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Utilities to be Disconnected: Locate, identify, disconnect, and seal or cap off utilities serving buildings and structures to be demolished. Consult with Owner's IT Director regarding disconnection of data cables.
 - 1. Arrange to shut off utilities with utility companies.
 - 2. If removal, relocation, or abandonment of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
 - 3. Cut off pipe or conduit a minimum of 12 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
 - 4. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.4 PROTECTION

- A. Existing Facilities: Protect adjacent power lines and driveways during demolition operations. Maintain exit routes from existing buildings.
- B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
- C. Temporary Protection: Erect temporary protection, such as fences where required by authorities having jurisdiction and as indicated. Comply with requirements in Section 015000 "Temporary Facilities and Controls."
 - 1. Protect adjacent facilities from damage due to demolition activities.
 - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 3. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.
 - 4. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
- D. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.5 DEMOLITION

- A. General: Demolish and/or remove indicated buildings and related elements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 - 2. Maintain fire watch during and for at least six (6) hours after flame-cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.
 - 4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
 - 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
- C. Explosives: Use of explosives is not permitted.

- D. Proceed with demolition systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- E. Demolish foundation walls and other below-grade construction that are within footprint of buildings being removed and extending 5 feet (1.5 m) outside footprint.
 - 1. Remove below-grade construction, including foundation walls, and footings completely.
- F. Existing Utilities: Abandon existing utilities and below-grade utility structures that are within 5 feet (1.5 m)] outside footprint. Abandon utilities outside this area.
- G. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil.
- H. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.
- I. Promptly repair damage to adjacent infrastructure caused by demolition operations.
- J. Seed demolition area with rye at the rate of 120 lbs/acre.

3.6 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction. All transportation costs and fees are responsibility of the contractor.
- B. Do not burn demolished materials.
- C. Clean adjacent improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION 024116